

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An apparatus for generating ozone and linearly controlling the concentration of the ozone being generated, comprising:

means for providing oxygen;

means for generating ozone by applying electrical discharge to the oxygen provided by the means for providing oxygen;

means for generating a control signal;

means for providing a first pulse signal, ~~wherein the first pulse signal is used for the electrical discharge and has an adjusted ON/OFF time ratio, wherein the first pulse signal providing means is configured to generate a low-frequency pulse having an ON/OFF time ratio depending on the control signal and a high-frequency pulse optimized for the electrical discharge, to mix the low-frequency pulse and the high-frequency pulse, and to generate the first pulse signal having an adjusted ON/OFF time ratio;~~ and

means for transforming the first pulse signal from the first pulse signal ~~provision providing~~ means into a predetermined signal level having a frequency in a range of 1 to 50 kHz, wherein the transformation means is electrically connected to the ozone generation means and the first pulse ~~provision~~ providing means.

Claims 2-3 (Cancelled)

Claim 4 (Currently Amended): The apparatus of Claim ~~[[3]]~~ 1, wherein ~~the second pulse signal has a relatively lower frequency than that of the third pulse signal, and each of the first pulse and the third pulse signals~~ high-frequency pulse has an identical frequency and a different ON/OFF time ratio.

Claim 5 (Previously Presented): The apparatus of Claim 1, wherein the ozone generation means includes:

at least one upper electrode and one lower electrode opposed to each other, for generating voltage discharge;

flat-shaped insulating material provided on one of each side of the upper electrode and the lower electrode; and

a cooling means provided adjacent to one of each side of the upper electrode and the lower electrode,

wherein the upper electrode is electrically connected to the transformation means, the first pulse signal is applied to the upper electrode, and the lower electrode is grounded.

Claim 6 (Original): The apparatus of Claim 5, wherein a gap ranging from 0.6 mm to 2 mm is provided between the upper and lower electrodes, in order to form a discharge space.

Claim 7 (Original): The apparatus of Claim 6, wherein the ozone is generated in the discharge space.

Claim 8 (Currently Amended): The apparatus of Claim ~~[[3]]~~ 1, wherein the first pulse ~~provision~~ providing means includes a first oscillating means for generating the ~~second pulse signal~~ low-frequency pulse and a second oscillating means for generating the ~~third pulse signal~~ high-frequency pulse.

Claim 9 (Cancelled)